

Abstract of the Disclosure

A pressure and vacuum valve manifold system such as may be used, for example, to actuate pneumatic bladders controlling airflow in a forced air HVAC system to provide zone climate control. The valves are individually operable to connect a respective individual bladder to pressure or to vacuum. Two manifolds can be mated and commonly fed pressure and vacuum. The two manifolds can be of identical construction. One manifold chamber from each can be connected into a single large pressure manifold, and another manifold chamber from each can be connected into a single large vacuum manifold. Such connections can be made with fittings which also serve as pressure and vacuum relief valves, respectively. The valve plungers are arranged in a grid, enabling a simple X-Y two-motor servo system to actuate all the valves, one at a time. The valves may be arranged such that the valves of one manifold are one half increment offset from the valves of the other manifold, enabling a single actuator having two actuator fingers to operate only a single manifold's valve at a time.